

AUTHOR INDEX

- Anderson, J., see Kaapa, P., 193
- Aoki, M., see Song, G., 329
- Armon, Y., see Koike, A., 169
- Aumont, J., see Richalet, J.-P., 205
- Bark, H., see Sasson, L., 15
- Bascom, D.A., Clement, I.D., Dorrington, K.L. and Robbins, P.A., Effects of dopamine and domperidone on ventilation during isocapnic hypoxia in humans, 319
- Betticher, D.C., Geiser, J. and Tempini, A., Lung diffusing capacity and red blood cell volume, 271
- Boecker, A., see Böning, D., 231
- Böning, D., Hollnagel, C., Boecker, A. and Göke, S., Bohr shift by lactic acid and the supply of O₂ to skeletal muscle, 231
- Cheek, J.M., see Kim, K.-J., 245
- Clemens, D., see Pinder, A.W., 1
- Clement, I.D., see Bascom, D.A., 319
- Crandall, E.D., see Kim, K.-J., 245
- Cross, C.E., see Lin, V.W., 339
- Dillon, G.H., Shonis, C.A. and Waldrop, T.G., Hypothalamic GABAergic modulation of respiratory responses to baroreceptor stimulation, 289
- Dillon, G.H., Welsh, D.E. and Waldrop, T.G., Modulation of respiratory reflexes by an excitatory amino acid mechanism in the ventrolateral medulla, 55
- Dorrington, K.L., see Bascom, D.A., 319
- Duron, B., see Wallois, F., 111
- Elliott, A.R., Steffey, E.P., Jarvis, K.A. and Marshall, B.E., Unilateral hypoxic pulmonary vasoconstriction in the dog, pony and miniature swine, 355
- Estenne, M., see Gorini, M., 83
- Feder, M.E., see Pinder, A.W., 1
- Geiser, J., see Betticher, D.C., 271
- Göke, S., see Böning, D., 231
- Gorini, M. and Estenne, M., Effect of head-up tilt on neutral inspiratory drive in the anesthetized dog, 83
- Guilleminault, C., see Stoohs, R., 151
- Hays, G.C., Webb, P.I. and Speakman, J.R., Arrhythmic breathing in torpid pipistrelle bats, *Pipistrellus pipistrellus*, 185
- Heimer, D., see Sasson, L., 15
- Hollnagel, C., see Böning, D., 231
- Hornych, A., see Richalet, J.-P., 205
- Hughes, M.R., see Kasserra, C.E., 383
- Ibe, B.O., see Kaapa, P., 193
- Inman, J.D.G., see Scott, S.C., 257
- Jarvis, K.A., see Elliott, A.R., 355
- Jones, D.R., see Kasserra, C.E., 383
- Jounieaux, V., see Wallois, F., 111
- Kaapa, P., Raj, J.U., Ibe, B.O. and Anderson, J., Vasoconstrictor response to prostacyclin in rabbit pulmonary circulation, 193
- Kasserra, C.E., Jones, D.R. and Hughes, M.R., Acid-base disturbance and ventilatory response to changes in plasma osmolality in Pekin ducks, 383
- Kim, K.-J., Cheek, J.M. and Crandall, E.D., Contribution of active Na⁺ and Cl⁻ fluxes to net ion transport by alveolar epithelium, 245
- Koike, A., Wasserman, K., Armon, Y. and Weiler-Ravell, D., The work-rate dependent effect of carbon monoxide on ventilatory control during exercise, 169
- Kramer, G.C., see Lin, V.W., 339
- Larmignat, P., see Richalet, J.-P., 205
- Leevers, A.M. and Road, J.D., Effect of lung inflation and upright posture on diaphragmatic shortening in dogs, 29

- Li, Y., see Zhang, F., 73
- Lin, V.W., Kramer, G.C., Parsons, G.H. and Cross, C.E., Laser Doppler velocimetry of tracheal blood flow in sheep, 339
- Lumb, A.B. and Nunn, J.F., Ribcage contribution to CO₂ response during rebreathing and steady state methods, 97
- MacLatchy, L.M., see Pörtner, H.-O., 217
- Macron, J.M., see Wallois, F., 111
- Marshall, B.E., see Elliott, A.R., 355
- Mitchell, G.S., see Warner, M.M., 41
- Mizuguchi, A., see Song, G., 329
- Mortola, J.P., Hamsters versus rats: ventilatory responses in adults and newborns, 305
- Moss, I.R., see Scott, S.C., 257
- Nagel, A., Metabolic, respiratory and cardiac activity in the shrew *Crocidura russula*, 139
- Nunn, J.F., see Lumb, A.B., 97
- Parsons, G.H., see Lin, V.W., 339
- Piiper, P. and Scheid, P., Diffusion limitation of O₂ supply to tissue in homogeneous and heterogeneous models, 127
- Pinder, A.W., Clemens, D. and Feder, M.E., Gas exchange in isolated perfused frog skin as a function of perfusion rate, 1
- Pörtner, H.-O., MacLatchy, L.M. and Toews, D.P., Acid-base regulation in the toad *Bufo marinus* during environmental hypoxia, 217
- Raj, J.U., see Kaapa, P., 193
- Rathat, C., see Richalet, J.-P., 205
- Rémy, P., see Richalet, J.-P., 205
- Richalet, J.-P., Hornych, A., Rathat, C., Aumont, J., Larmignat, P. and Rémy, P., Plasma prostaglandins, leukotrienes and thromboxane in acute high altitude hypoxia, 205
- Road, J.D., see Leivers, A.M., 29
- Robbins, P.A., see Bascom, D.A., 319
- Sasson, L., Tarasiuk, A., Heimer, D. and Bark, H., Effect of dexamethasone on diaphragmatic and soleus muscle morphology and fatigability, 15
- Scheid, P., see Piiper, J., 127
- Scott, S.C., Inman, J.D.G. and Moss, I.R., Modulation by mu opioid antagonism of sleep and respiration in neonatal swine, 257
- Shonis, C.A., see Dillon, G.H., 289
- Song, G., Mizuguchi, A. and Aoki, M., Axonal projections from the pontine pneumotaxic region to the nucleus raphe magnus in cats, 329
- Speakman, J.R., see Hays, G.C., 185
- Steffey, E.P., see Elliott, A.R., 355
- Stoohs, R. and Guilleminault, C., Snoring during NREM sleep: Respiratory timing, esophageal pressure and EEG arousal, 151
- Tarasiuk, A., see Sasson, L., 15
- Tempini, A., see Betticher, D.C., 271
- Toews, D.P., see Pörtner, H.-O., 217
- Van Lunteren, E., Contractile and endurance properties of feline triangularis sterni muscle, 279
- Waldrop, T.G., see Dillon, G.H., 55
- Waldrop, T.G., see Dillon, G.H., 289
- Wallois, F., Macron, J.M., Jounieaux, V. and Duron, B., Trigeminal nasal receptors related to respiration and to various stimuli in cats, 111
- Warner, M.M. and Mitchell, G.S., Role of catecholamines and β -receptors in ventilatory response during hypoxic exercise, 41
- Wasserman, K., see Koike, A., 169
- Webb, P.I., see Hays, G.C., 185
- Weiler-Ravell, D., see Koike, A., 169
- Welsh, D.E., see Dillon, G.H., 55
- Wood, S.C., Temperature acclimation of respiratory function in the salamander *Taricha granulosa*, 371
- Wu, Z., see Zhang, F., 73
- Zhang, F., Wu, Z. and Li, Y., Effect of blocking medial area of nucleus retrofacialis on respiratory rhythm, 73

SUBJECT INDEX

- Acid-base balance
 - during hypoxia (toad), 217
 - intracellular, hyperoxia (trout), 371
 - plasma osmolality (duck), 383
- Airways
 - blood flow, 339
- Allometry
 - O₂ consumption in shrew, 139
- Alveolar epithelium
 - ion transport across -, 245
- Amino acids
 - and respiratory reflexes, 55
- Amphibians
 - bullfrog, 1
 - toad *Bufo marinus*, 217
- Baroreceptors
 - respiratory effects via hypothalamus, 289
- Biogenic mediators
 - dopamine, 319
- Bird
 - Pekin duck, 383
- Blood flow
 - airways, 339
 - pulmonary, hypoxic vasoconstriction, 355
- Bohr shift
 - and muscle O₂ supply, 231
 - by lactic acid, 231
- Burrowing
 - hypoxic response, 305
- Carbon dioxide
 - stimulation of breathing, 97
- Carbon monoxide
 - and control of breathing in exercise, 169
- Catecholamines
 - role during hypoxic exercise, 41
- Chest wall mechanics
 - and respiratory muscles, 29
- Contractility
 - of triangularis sterni muscle, 279
- Control of breathing
 - and baroreceptors, 289
 - burrowing mammals, 305
 - dopamine and hypoxic response, 319
 - during exercise, 41
 - excitatory amino acids, 55
 - exercise hyperpnea, 169
 - hypothalamic modulation, 289
 - pons, 329
 - respiratory muscles, 83
 - response to CO₂, 97
 - rhythm generator, 73
- Diffusing capacity
 - lung, O₂, 271
 - of frog skin, 1
- Diffusion limitation
 - in tissue O₂ supply, 127
- Diffusive O₂ transport
 - torpid bat, 185
- Electrolytes
 - intracellular Na⁺, K⁺, 371
- Electrophysiological recording
 - pneumotaxic center, 329
- Exercise
 - and hypoxia, 41
 - ventilation, 169
- Fatigue
 - respiratory muscles, 15, 279
- Fish
 - rainbow trout, 371
- Fluid balance
 - across alveolar epithelium, 245
- GABA
 - rat hypothalamus, 289
- Gas exchange
 - cutaneous, 1
- Hypercapnia
 - and amino acids, 55
- Hyperoxia
 - acid-base status (trout), 371
- Hypothalamus
 - GABAergic modulation of baroreceptor effects, 289

- Hypoxia
 acute mountain sickness, 205
 and amino acids, 55
 and exercise, 41
 and prostaglandins, 205
 dopamine, 319
 pulmonary vasoconstriction, 355
 tissue acid-base balance (toad), 217
- Inspiratory drive
 and postural changes, 83
- Ion transport
 fluxes of Na^+ and Cl^- across alveolar epithelium, 245
- Lactic acid
 and exercise hyperpnea, 169
 and muscle O_2 supply, 231
- Laser Doppler velocimetry
 comparison with microsphere injection, 339
- Life state
 ventilation adult vs newborn (rat, hamster), 305
- Mammal
 bat (*Pipistrellus pipistrellus*), 185
 cat, 271, 279, 329
 dog, pony, swine, 355
 goat, 41
 hamster, 305
 human, 319
 rat, 305
 sheep, 339
 shrew (*Crocidura russula*), 139
- Mechanics of breathing
 and respiratory muscles, 29
- Medulla
 respiratory reflexes and amino acids, 55
- Metabolism
 in shrew, 139
- Models
 for tissue O_2 supply, 127
- Muscle
 models for O_2 supply, 127
 O_2 supply and Bohr shift, 231
 steroids and fatigue, 15
- Nasal receptors
 and respiration, 111
- Nucleus retrofacialis
 and respiratory rhythm, 73
- Pattern of breathing
 during snoring, 151
- in sleep, 257
- torpid bat, 185
- Pharmacological agents
 domperidone, 319
- Pig
 sleep/wake state, 257
- Plasma osmolality
 acid-base state (duck), 383
 ventilation (duck), 383
- Pons
 pneumotoxic center, 329
- Posture
 and diaphragm shortening, 29
- Prostaglandins
 and pulmonary vascular resistance, 193
 in acute mountain sickness, 205
- Pulmonary vascular resistance
 effects of PGI_2 , 193
 in juvenile and adult rabbits, 193
- Receptors
 of nasal mucosa, 111
- Red cell volume
 and lung D_{O_2} , 271
- Respiratory muscle
 fatigue, 15
 triangularis sterni in vitro, 279
- Respiratory muscles
 and postural changes, 83
 length-tension relationship in diaphragm, 29
- Respiratory rhythm
 and nucleus retrofacialis, 73
- Skin
 O_2 exchange, 1
- Sleep
 mu opioid antagonist, 257
 NREM – and snoring, 151
- Snoring
 and pattern of breathing, 151
 in NREM sleep, 151
- Steroids
 and muscle fatigue, 15
- Tissue
 models for O_2 supply, 127
- Torpidity
 arrhythmic breathing in bat, 185
- Trigeminal nerves
 nasal receptors, 111
- Ventilatory response to CO_2
 contribution by rib cage and abdomen, 97

